

**VA Water Quality Standards Triennial Review  
Ad Hoc Advisory Committee (reconvened)**

May 26, 2009

1:00 PM

DEQ Piedmont Regional Office Training Room  
4949-A Cox Road, Glen Allen, VA  
(804) 527-5020

**Draft Agenda**

- I. Welcome & Introductions
- II. Freshwater mussels-endangered species issues
- III. Potential need for recalculation of the water quality criteria for the protection of aquatic life for ammonia, and/or copper
  - a. New toxicity data for freshwater mussels
  - b. Comparison to EPA's/Virginia's criteria
  - c. EPA plans to address ammonia criteria
  - d. Discussion

Information on previous Committee meetings including presentations and summaries can be found on the DEQ web site at:

[http://www.deq.virginia.gov/wqs/rule.html#Triennial Review Carryover](http://www.deq.virginia.gov/wqs/rule.html#Triennial%20Review%20Carryover)

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## **Summary of Six Issues**

1. **Ammonia:** New toxicity studies on early life stages of freshwater mussels have demonstrated adverse effects at concentrations lower than the criteria levels.
2. **Copper:** New toxicity studies on early life stages of some species of freshwater mussels have demonstrated adverse effects at concentrations lower than the levels of copper allowed for by the current water quality criteria.
3. **Cadmium:** Two new recalculated criteria documents are available. One proposal titled “Addendum to the U.S. EPA Cadmium Water Quality Criteria Document - Technical Review and Criteria Update” (dated 2004) produced by Chadwick Ecological Consultants, Inc on behalf of the Association of Metropolitan Sewerage Agencies (AMSA). Also, a more recent attempt to recalculate the cadmium criteria has been published by the U.S. Geological Survey (USGS), titled; “Cadmium Risks to Freshwater Life: Derivation and Validation of Low-Effect Criteria Values Using Laboratory and Field Studies”, December 2006.
4. **Cyanide:** VAMWA has requested that DEQ recalculate the WQC for cyanide based on a report “Scientific Review of Cyanide Ecotoxicology and Evaluation of Ambient Water Quality Criteria: Final Report” (January 2007) produced on behalf of the Water Environment Research Foundation (WERF).
5. **Lead:** This issue involves proper conversion factor to apply to the Virginia aquatic life criteria for lead to convert the criteria concentrations to dissolved concentrations. Virginia recalculated the WQC for lead in 1998-1999 after literature review and using updated database. The basis for the VA 1999 WQC for lead is different than EPA’s 1985 WQC.
6. **Mixing Zone Prohibitions:** This issue involves the potential prohibition of mixing zones for persistent bioaccumulative substances for new or expanded dischargers.